## Amendments to the claims

Applicants are hereby affirming the provisional election made on April 24, 2006 to prosecute Group VII, claims 90-102. Applicants reserve the right to file a divisional application on the non-elected matter.

Claims 90-102 are pending. Claims 90-92, 94-96, 98, 100-101 are rejected. Claims 90-102 are amended.

The following list of claims will replace prior versions and listing of claims in the application:

1. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to said mammal in need of such treatment a therapeutically effective amount of a compound of formula (I)

$$R_B$$
 $R_C$ 
 $R_D$ 
 $R_E$ 
 $R_F$ 
 $R_F$ 
 $R_F$ 

a pharmaceutically acceptable salt, ester, amide, or prodrug thereof, wherein

A is a selected from the group consisting of

X is selected from the group consisting of NH, O and S;

L is selected from the group consisting of CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub> and CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>;

 $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro,  $-NZ_1Z_2$ ,  $(NZ_1Z_2)$ carbonyl and  $(NZ_1Z_2)$ sulfonyl wherein  $Z_1$  and  $Z_2$  are each independently selected from the group consisting of hydrogen, alkyl, alkylcarbonyl, alkylsulfonyl and formyl;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro,  $-NZ_1Z_2$  and  $(NZ_1Z_2)$ carbonyl;

 $R_E$  is selected from the group consisting of hydrogen, alkoxycarbonyl, alkyl, alkylcarbonyl, arylcarbonyl, cycloalkylcarbonyl, heterocyclecarbonyl and  $(NZ_1Z_2)$ carbonyl;

R<sub>F</sub> is selected from the group consisting of hydrogen and alkyl;

Z is selected from the group consisting of N, C and CH; and

--- is a bond when Z is C and --- is absent when Z is N or CH.

2. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is N; and

--- is absent.

3. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is N;

--- is absent; and

$$R_1$$
 $R_2$ 
 $R_3$ 
 $R_4$ 

A is

4. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

R<sub>F</sub> is hydrogen;

Z is N;

--- is absent;

A is

$$R_{2}$$
 $R_{3}$ 
 $R_{4}$ 
 $R_{5}$ ; and

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen.

- 5. (Withdrawn) The method according to claim 4 wherein said compound of formula (I) is selected from the group consisting of
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole; and
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol.
- 6. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

R<sub>F</sub> is hydrogen;

Z is N;

--- is absent;

A is

$$R_{1}$$
 $R_{2}$ 
 $R_{3}$ 
 $R_{4}$ 
 $R_{5}$ ; and

R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are each hydrogen.

- 7. (Withdrawn) The method according to claim 6 wherein said compound of formula (I) is 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol.
- 8. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is N;

--- is absent; and

A is

$$R_1$$
 $R_2$ 
 $R_3$ 
 $R_4$ 

9. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

RE is hydrogen;

R<sub>F</sub> is hydrogen;

Z is N;

--- is absent;

## A is

$$R_1$$
  $R_2$   $R_3$   $R_4$  : and

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen.

- 10. (Withdrawn) The method according to claim 9 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 11. (Withdrawn) The method according to claim 9 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 12. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

R<sub>F</sub> is alkyl;

Z is N;

--- is absent;

A is

$$R_1$$
  $R_2$   $R_3$   $R_4$  : and

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen.

13. (Withdrawn) The method according to claim 12 wherein said compound of formula (I) is selected from the group consisting of

2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;

2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole; and

2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole.

14. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is N;

--- is absent;

A is

$$R_1$$
  $R_2$   $R_3$   $R_4$  ; and

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen and hydroxy.

15. (Withdrawn) The method according to claim 1 wherein

R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

R<sub>F</sub> is hydrogen;

L is CH<sub>2</sub>;

Z is N;

--- is absent;

A is

$$R_1$$
 $R_2$ 
 $R_3$ 
 $R_4$ 

R<sub>1</sub>, R<sub>2</sub> and R<sub>4</sub> are each hydrogen; and

R<sub>3</sub> is hydroxy.

16. (Withdrawn) The method according to claim 15 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.

17. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is N;

--- is absent; and

A is

18. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

R<sub>F</sub> is hydrogen;

Z is N;

--- is absent;

A is

$$R_3$$
 $R_4$ ; and

 $R_2$ ,  $R_3$  and  $R_4$  are each hydrogen.

- 19. (Withdrawn) The method according to claim 18 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 20. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is N;

--- is absent; and

A is

$$X \longrightarrow R_2$$
 $R_3$ 

21. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

R<sub>F</sub> is hydrogen;

Z is N;

--- is absent;

A is

R<sub>2</sub> and R<sub>3</sub> are each hydrogen; and

X is S.

- 22. (Withdrawn) The method according to claim 21 wherein said compound of formula (I) is 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 23. (Withdrawn) The method according to claim 1 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

 $R_E$  is selected from the group consisting of alkoxycarbonyl, alkylcarbonyl, alkylcarbonyl, cycloalkylcarbonyl, heterocyclecarbonyl and  $(NZ_1Z_2)$ carbonyl;

Z is N;

--- is absent; and

A is

$$R_1$$
 $R_2$ 
 $R_3$ 
 $R_4$ 

24. (Withdrawn) The method according to claim 1 wherein

L is CH<sub>2</sub>;

R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen;

 $R_E$  is selected from the group consisting of alkoxycarbonyl, alkylcarbonyl,  $(NZ_1Z_2)$ carbonyl and heterocyclecarbonyl wherein the heterocycle portion of said heterocyclecarbonyl is pyrrolidinyl;

R<sub>F</sub> is hydrogen;

Z is N;

--- is absent;

A is

$$R_{2}$$
 $R_{3}$ 
 $R_{4}$ ; and

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen.

25. (Withdrawn) The method according to claim 24 wherein said compound of formula (I) is selected from the group consisting of

isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;

2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole; and

N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide.

26. (Withdrawn) The method according to claim 1 wherein

R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen;

Z is CH;
is absent; and
A is
•
27. (Withdrawn) The method according to claim 1 wherein
L is CH <sub>2</sub> ;
$R_A$ , $R_B$ , $R_C$ and $R_D$ are each independently selected from the group consisting of hydrogen and halogen;
R <sub>E</sub> is hydrogen;
R <sub>F</sub> is hydrogen;
Z is CH;
is absent;
A is
; and
R <sub>2</sub> , R <sub>3</sub> and R <sub>4</sub> are each hydrogen.
28. (Withdrawn) The method according to claim 27 wherein said compound of formula (I) is 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole.
29. (Withdrawn) The method according to claim 1 wherein

$R_A$ , $R_B$ , $R_C$ and $R_D$ are each independently selected from the group consisting of hydrogen and halogen;
R <sub>E</sub> is hydrogen;
Z is CH;
is absent; and
A is
30. (Withdrawn) The method according to claim 1 wherein
L is CH <sub>2</sub> ;
$R_A$ , $R_B$ , $R_C$ and $R_D$ are each independently selected from the group consisting of hydrogen and halogen;
R <sub>E</sub> is hydrogen;
R <sub>F</sub> is hydrogen;
Z is CH;
is absent;
A is
; and
R <sub>2</sub> , R <sub>3</sub> and R <sub>4</sub> are each hydrogen.
31. (Withdrawn) The method according to claim 30 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole.

R <sub>A</sub> , R <sub>B</sub> , R <sub>C</sub> and R <sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen;
R <sub>E</sub> is hydrogen;
Z is C;
is a bond; and
A is
33. (Withdrawn) The method according to claim 1 wherein
L is CH <sub>2</sub> ;
$R_A$ , $R_B$ , $R_C$ and $R_D$ are each independently selected from the group consisting of hydrogen and halogen;
R <sub>E</sub> is hydrogen;
R <sub>F</sub> is hydrogen;
Z is C;
is a bond;
A is
; and
R <sub>2</sub> , R <sub>3</sub> and R <sub>4</sub> are each hydrogen.

32. (Withdrawn) The method according to claim 1 wherein

- 34. (Withdrawn) The method according to claim 33 wherein said compound of formula (I) is 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole.
- 35. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to said mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof in combination with a pharmaceutically acceptable carrier.
- 36. (Withdrawn) The method according to claim 35 wherein said compound of formula
- (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide:
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 37. (Withdrawn) The method according to claim 35 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 38. (Withdrawn) The method according to claim 35 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).

- 39. (Withdrawn) The method according to claim 35 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 40. The method according to claim 35 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.
- 41. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to said mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof in combination with a phosphodiesterase 5 inhibitor.
- 42. (Withdrawn) The method according to claim 41 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- $\hbox{$2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1$H-benzimidazole;}$
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-vlmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 43. (Withdrawn) The method according to claim 41 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.

- 44. (Withdrawn) The method according to claim 41 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).
- 45. (Withdrawn) The method according to claim 41 wherein said compound of formula
- (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 46. (Withdrawn) The method according to claim 41 wherein said compound of formula
- (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.
- 47. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to said mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof in combination with an adrenergic receptor antagonist.
- 48. (Withdrawn) The method according to claim 47 wherein said compound of formula
- (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and

- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 49. The method according to claim 47 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 50. (Withdrawn) The method according to claim 47 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).
- 51. (Withdrawn) The method according to claim 47 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 52. (Withdrawn) The method according to claim 47 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.
- 53. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to said mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof in combination with a dopamine agonist.
- 54. (Withdrawn) The method according to claim 53 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;

- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 55. (Withdrawn) The method according to claim 53 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 56. (Withdrawn) The method according to claim 53 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).
- 57. (Withdrawn) The method according to claim 53 wherein said compound of formula
- (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 58. (Withdrawn) The method according to claim 53 wherein said compound of formula
- (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.
- 59. (Withdrawn) A method of treating male erectile dysfunction in a male human comprising administering to said male human in need of such treatment a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof.
- 60. (Withdrawn) The method according to claim 59 wherein said compound of formula
- (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;

- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 61. (Withdrawn) The method according to claim 59 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole or a pharmaceutically acceptable salt or prodrug thereof.
- 62. (Withdrawn) The method according to claim 59 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).
- 63. (Withdrawn) The method according to claim 59 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole or a pharmaceutically acceptable salt or prodrug thereof.
- 64. (Withdrawn) The method according to claim 59 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol or a pharmaceutically acceptable salt or prodrug thereof.
- 65. (Withdrawn) A method of treating female sexual dysfunction in a female human comprising administering to said female human in need of such treatment a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof.
- 66. (Withdrawn) The method according to claim 65 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;

- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 67. (Withdrawn) The method according to claim 65 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole or a pharmaceutically acceptable salt or prodrug thereof.
- 68. (Withdrawn) The method according to claim 65 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).
- 69. (Withdrawn) The method according to claim 65 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole or a pharmaceutically acceptable salt or prodrug thereof.
- 70. (Withdrawn) The method according to claim 65 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol or a pharmaceutically acceptable salt or prodrug thereof.
- 71. (Withdrawn) A method of treating a disorder selected from the group consisting of attention deficit hyperactivity disorder, Alzheimer's disease, drug abuse, Parkinson's disease, schizophrenia, anxiety, mood disorders and depression in a mammal comprising administering to said mammal in need of such treatment a therapeutically effective

amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof.

- 72. (Withdrawn) The method according to claim 71 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;
- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.
- 73. (Withdrawn) The method according to claim 71 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole; and
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole.
- 74. The method according to claim 71 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 75. (Withdrawn) The method according to claim 71 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).

- 76. (Withdrawn) The method according to claim 71 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 77. (Withdrawn) The method according to claim 71 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.
- 78. (Withdrawn) A method of treating cardiovascular disorders in a mammal comprising administering to said mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof.
- 79. (Withdrawn) The method according to claim 78 wherein said compound of formula (I) is selected from the group consisting of

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2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
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isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate; 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole; N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide;

- 2-[(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- $\hbox{$2$-\{[4$-(2-methoxyphenyl)piperazin-1-yl]methyl\}-1$H-benzimidazole;}$
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- $2\hbox{-}(\{4\hbox{-}[2\hbox{-}(methylthio)phenyl]piperazin-1-yl}\} methyl)\hbox{-}1H\hbox{-}benzimidazole;}$
- $\hbox{$2$-\{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl\}-1$H-benzimidazole;}$
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- $\hbox{$2$-\{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl\}-1$H-benzimidazole;}$
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- $\hbox{$2$-\{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl\}-1$H-benzimidazole;}$
- $2-\{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl\}-1H-benzimidazole;$
- N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and
- 2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.

- 80. (Withdrawn) The method according to claim 78 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 81. (Withdrawn) The method according to claim 78 wherein said compound of formula
- (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).
- 82. (Withdrawn) The method according to claim 78 wherein said compound of formula
- (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.
- 83. (Withdrawn) The method according to claim 78 wherein said compound of formula
- (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.
- 84. (Withdrawn) A method of treating inflammatory disorders in a mammal comprising administering to said mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof.
- 85. (Withdrawn) The method according to claim 84 wherein said compound of formula (I) is selected from the group consisting of
- 2-{[4-(3-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]nicotinonitrile;
- 5,7-dibromo-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 5-fluoro-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[4-(1,3-thiazol-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- isobutyl 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxylate;
- 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1-(pyrrolidin-1-ylcarbonyl)-1H-benzimidazole;
- N,N-dimethyl-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole-1-carboxamide:
- 2-f(4-phenylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]benzonitrile;
- 2-{[4-(2-chlorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-fluorophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-nitrophenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-{[4-(2-methoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 4-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-({4-[2-(methylthio)phenyl]piperazin-1-yl}methyl)-1H-benzimidazole;
- 2-{[4-(2-ethoxyphenyl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]phenol;
- 2-{[4-(2-methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole;
- 2-[(4-pyridin-2-ylpiperidin-1-yl)methyl]-1H-benzimidazole;
- 2-[(4-phenyl-3,6-dihydropyridin-1(2H)-yl)methyl]-1H-benzimidazole;
- 2-{[4-(6-methylpyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole;
- 2-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole;
- 2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole;

2-{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole; N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide; and

2-{[4-(3-fluoropyridin-2-yl)piperazin-1-yl]methyl}-1H-benzimidazole.

86. (Withdrawn) The method according to claim 84 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.

87. (Withdrawn) The method according to claim 84 wherein said compound of formula (I) is 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole bis((L)tartrate).

88. (Withdrawn) The method according to claim 84 wherein said compound of formula (I) is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.

89. (Withdrawn) The method according to claim 84 wherein said compound of formula (I) is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.

90. (Currently Amended) A compound of formula (II)

$$R_{B}$$
 $R_{C}$ 
 $R_{D}$ 
 $R_{E}$ 
 $R_{E}$ 
 $R_{E}$ 
 $R_{E}$ 

or a pharmaceutically acceptable salt, ester, or amide, or prodrug thereof, wherein

A is a selected from the group consisting of

X is selected from the group consisting of NH, O and S;

L is selected from the group consisting of CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub> and CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>;

 $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro,  $-NZ_1Z_2$  and  $(NZ_1Z_2)$ carbonyl wherein  $Z_1$  and  $Z_2$  are each independently selected from the group consisting of hydrogen, alkyl, alkylcarbonyl, alkylsulfonyl and formyl;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro, -NZ<sub>1</sub>Z<sub>2</sub> and (NZ<sub>1</sub>Z<sub>2</sub>)carbonyl;

 $R_E$  is selected from the group consisting of hydrogen, alkoxycarbonyl, alkyl, alkylcarbonyl, arylcarbonyl, cycloalkylcarbonyl, heterocyclecarbonyl and  $(NZ_1Z_2)$ carbonyl; and

R<sub>F</sub> is selected from the group consisting of hydrogen and alkyl;

## provided that when A is

$$R_2$$
 $R_3$ 

and X is S, then  $R_2$  or  $R_3$  is other than hydrogen.

91. (Currently Amended) The A compound according to claim 90 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

RE is hydrogen; and

A is

92. (Currently Amended) A-The compound according to claim 90 wherein

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

RE is hydrogen;

R<sub>F</sub> is hydrogen;

L is CH<sub>2</sub>;

A is

$$R_2$$
 $R_3$ 
 $R_4$ ; and

 $R_2$ ,  $R_3$  and  $R_4$  are each hydrogen.

93. (Currently Amended) A-The compound according to claim 92 that is 2-[(4-pyrimidin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole.

94. (Currently Amended) A compound of formula (III)

or a pharmaceutically acceptable salt, ester, or amide, or prodrug thereof, wherein

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen, alkylsulfinyl, alkylsulfonyl, alkylsulfonylamino, alkylthio and hydroxy;

L is selected from the group consisting of CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub> and CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro, -NZ<sub>1</sub>Z<sub>2</sub> and (NZ<sub>1</sub>Z<sub>2</sub>)carbonyl wherein Z<sub>1</sub> and Z<sub>2</sub> are each independently selected from the group consisting of hydrogen, alkyl, alkylcarbonyl, alkylsulfonyl and formyl;

R<sub>E</sub> is selected from the group consisting of hydrogen, alkoxycarbonyl, alkyl, alkylcarbonyl, arylcarbonyl, cycloalkylcarbonyl, heterocyclecarbonyl and (NZ<sub>1</sub>Z<sub>2</sub>)carbonyl; and

R<sub>F</sub> is selected from the group consisting of hydrogen and alkyl;

provided that when  $R_F$  is hydrogen, than at least one of  $R_1$ ,  $R_2$ ,  $R_3$ , or  $R_4$  is other than hydrogen;

95. (Currently Amended) A-The compound according to claim 94 wherein

 $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  are each independently selected from the group consisting of hydrogen and hydroxy;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen; and

RE is hydrogen. -

96. (Currently Amended) A-The compound according to claim 94 wherein

R<sub>1</sub>, R<sub>2</sub> and R<sub>4</sub> are each hydrogen;

R<sub>3</sub> is hydroxy;

L is  $CH_2$ ;

R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen; and

R<sub>F</sub> is hydrogen.

97. (Currently Amended) A-The compound according to claim 96 that is 6-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-ol.

98. (Currently Amended) A-The compound according to claim 94 wherein

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen;

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

R<sub>E</sub> is hydrogen; and

R<sub>F</sub> is alkyl.

99. (Currently Amended) A-The compound according to claim 98 selected from the group consisting of

 $\hbox{$2$-[(2-methyl-4-pyridin-2-ylpiperazin-1-yl)methyl]-1$H-benzimidazole;}$ 

2-{[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl}-1H-benzimidazole; and

 $2-\{[(2R)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]methyl\}-1H-benzimidazole.$ 

100. (Currently Amended) A-The compound according to claim 94 wherein

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen and alkylsulfonylamino;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen.; and

RE is hydrogen.

101. (Currently Amended) A-The compound according to claim 94 wherein

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen;

R<sub>1</sub> is alkylsulfonylamino;

L is CH<sub>2</sub>;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen and halogen;

RE is hydrogen; and

R<sub>F</sub> is hydrogen.

**102.** (Currently Amended) A-The compound according to claim 101 that is N-{2-[4-(1H-benzimidazol-2-ylmethyl)piperazin-1-yl]pyridin-3-yl}methanesulfonamide.

103. (Withdrawn) A compound of formula (IV)

(IV)

or a pharmaceutically acceptable salt, ester, amide, or prodrug thereof, wherein

A is a selected from the group consisting of

X is selected from the group consisting of NH, O and S;

L is selected from the group consisting of CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub> and CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>;

 $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro,  $-NZ_1Z_2$  and  $(NZ_1Z_2)$ carbonyl wherein  $Z_1$  and  $Z_2$  are each independently selected from the group consisting of hydrogen, alkyl, alkylcarbonyl, alkylsulfonyl and formyl;

 $R_A$ ,  $R_B$ ,  $R_C$  and  $R_D$  are each independently selected from the group consisting of hydrogen, alkoxy, alkenyl, alkyl, alkylsulfinyl, alkylsulfonyl, alkylthio, alkynyl, alkoxycarbonyl, alkylcarbonyl, alkylcarbonyloxy, carboxy, cyano, formyl, halogen, haloalkoxy, haloalkyl, hydroxy, hydroxyalkyl, mercapto, nitro,  $-NZ_1Z_2$  and  $(NZ_1Z_2)$ carbonyl wherein  $Z_1$  and  $Z_2$  are each independently selected from the group consisting of hydrogen, alkyl, alkylcarbonyl, alkylsulfonyl and formyl;

 $R_E$  is selected from the group consisting of hydrogen, alkoxycarbonyl, alkyl, alkylcarbonyl, arylcarbonyl, cycloalkylcarbonyl, heterocyclecarbonyl and  $(NZ_1Z_2)$ carbonyl;

R<sub>F</sub> is selected from the group consisting of hydrogen and alkyl;

Z is selected from the group consisting of C and CH; and

```
104. (Withdrawn) A compound according to claim 103 wherein
R_{\text{A}},\,R_{\text{B}},\,R_{\text{C}} and R_{\text{D}} are each independently selected from the group consisting of
hydrogen and halogen;
R<sub>E</sub> is hydrogen;
Z is CH;
--- is absent when Z is CH; and
A is
105. (Withdrawn) A compound according to claim 103 wherein
R_{\text{A}},\,R_{\text{B}},\,R_{\text{C}} and R_{\text{D}} are each independently selected from the group consisting of
hydrogen and halogen;
R<sub>E</sub> is hydrogen;
R<sub>F</sub> is hydrogen;
L is CH<sub>2</sub>;
Z is CH;
--- is absent when Z is CH;
A is
; and
```

--- is a bond when Z is C and --- is absent when Z is CH.

106. (Withdrawn) A compound according to claim 105 that is 2-{[4-(2methoxyphenyl)piperidin-1-yl]methyl}-1H-benzimidazole. 107. (Withdrawn) A compound according to claim 103 wherein R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen; R<sub>E</sub> is hydrogen; Z is CH; --- is absent when Z is CH; and A is 108. (Withdrawn) A compound according to claim 103 wherein R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of hydrogen and halogen; R<sub>E</sub> is hydrogen; R<sub>F</sub> is hydrogen; L is CH<sub>2</sub>; Z is CH; --- is absent when Z is CH; A is

R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen.

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R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are each hydrogen.
109. (Withdrawn) A compound according to claim 108 that is 2-[(4-pyridin-2-
ylpiperidin-1-yl)methyl]-1H-benzimidazole.
110. (Withdrawn) A compound according to claim 103 wherein
R_{\text{A}},\,R_{\text{B}},\,R_{\text{C}} and R_{\text{D}} are each independently selected from the group consisting of
hydrogen and halogen;
R<sub>E</sub> is hydrogen;
Z is C;
--- is a bond; and
A is
111. (Withdrawn) A compound according to claim 103 wherein
R<sub>A</sub>, R<sub>B</sub>, R<sub>C</sub> and R<sub>D</sub> are each independently selected from the group consisting of
hydrogen and halogen;
R<sub>E</sub> is hydrogen;
R<sub>F</sub> is hydrogen;
L is CH_2;
Z is C;
--- is a bond;
A is
```

; and

; and

 $R_2$ ,  $R_3$  and  $R_4$  are each hydrogen.

112. (Withdrawn) A salt of the compound 2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]-1H-benzimidazole wherein said salt is selected from the group consisting of adipate, alginate, citrate, aspartate, benzoate, benzenesulfonate, bisulfate, butyrate, camphorate, camphorsufonate, digluconate, glycerophosphate, hemisulfate, heptanoate, hexanoate, fumarate, sesqui(fumarate), hydrochloride, dihydrochloride, trihydrochloride, hydrobromide, hydroiodide, 2-hydroxyethansulfonate (isethionate), lactate, maleate, methanesulfonate, nicotinate, 2-naphthalenesulfonate, oxalate, pamoate, pectinate, persulfate, 3-phenylpropionate, picrate, pivalate, propionate, succinate, sulfate, bis(tartrate), tartrate, (L) tartrate, bis((L) tartrate), (D) tartrate, bis((L) tartrate), (DL) tartrate, bis((DL) tartrate), meso-tartrate, bis(meso tartrate), thiocyanate, phosphate, glutamate, bicarbonate, bis((D)tartrate), bis(bromide), bis(sulfate), bis(phosphate), tris(hydrochloride), p-toluenesulfonate, and undecanoate.

113. (Withdrawn) The compound of claim 112 wherein said salt is selected from the group consisting of bis((L) tartrate), bis((D) tartrate), bis((DL) tartrate), bis(bromide), bis(sulfate), bis(phosphate), fumarate, sesqui(fumarate), and tris(hydrochloride).